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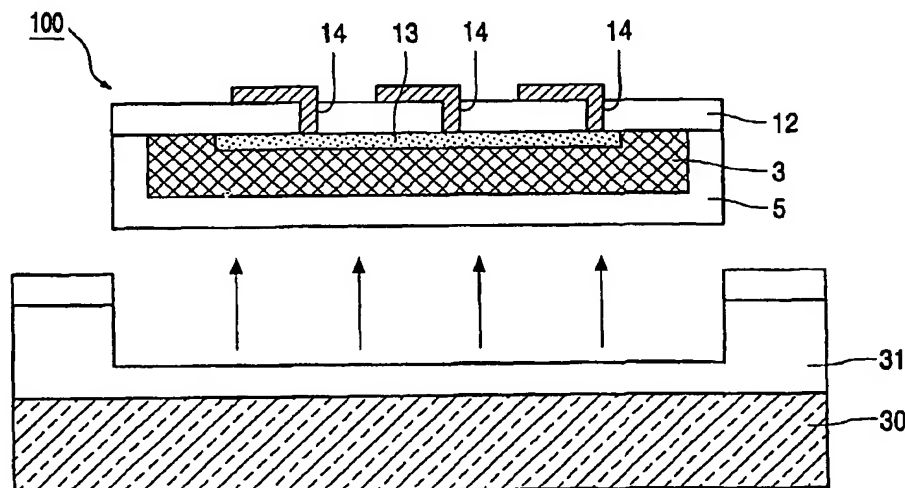
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Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,

[Continued on next page]

(54) Title: FLEXIBLE SEMICONDUCTOR DEVICE AND METHOD OF MANUFACTURING THE SAME



(57) Abstract: The rollable device of the invention comprises a substrate of an insulating material (12) with apertures (15) extending from a first to a second side. On the first side switching elements (13) are present, as well as interconnect lines and the like, covered by a coating of organic material (3). On the second side a functional layer is present. Examples of such functional layers include capacitors, antennas and particularly electro-optical layers. Thus, with a rollable display that may include an antenna and a driver circuit is obtained.



TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Classification No
PCT/IB 03/04925

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01L21/68 H01L23/31 G06K19/077

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G02F H01L G06K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 127 199 A (INOUE SATOSHI ET AL) 3 October 2000 (2000-10-03) column 6, line 21 - line 26 column 11, line 24 - line 48 column 12, line 27 - line 29 column 12, line 54 - line 60 column 18, line 63 - column 19, line 12 column 21, line 51 - column 22, line 51; figures 39-42	1,3,4,7, 9 5,11
X	US 2002/030189 A1 (ISHIKAWA AKIRA) 14 March 2002 (2002-03-14) paragraphs [0280] - [0308], [0316], [0317]; figures 1-28 ----- -/--	1,3,4,7, 9

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

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- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- "&" document member of the same patent family

Date of the actual completion of the international search

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International Search No.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 19, 5 June 2001 (2001-06-05) -& JP 2001 044445 A (SEMICONDUCTOR ENERGY LAB CO LTD), 16 February 2001 (2001-02-16) abstract	1,3,4,7, 9
Y	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 09, 31 July 1998 (1998-07-31) -& JP 10 090668 A (TOSHIBA CORP), 10 April 1998 (1998-04-10) abstract	5
Y	WO 02/073572 A (E INK CORP) 19 September 2002 (2002-09-19) the whole document	11
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 01, 31 January 2000 (2000-01-31) -& JP 11 274733 A (TOSHIBA CORP), 8 October 1999 (1999-10-08) abstract	1-5
A	US 2002/070910 A1 (FUJIEDA ICHIRO ET AL) 13 June 2002 (2002-06-13) the whole document	11

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB 03/04925

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1,3-7,9,11

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1,3,4,5,6,7,9,11

a flexible electronic device comprising electro-optical layer in conjunction with a switching element in an active semiconductor layer provided on an insulating layer, a display pixel and method of fabricating the same.

2. claim: 2

a electronic device comprising switching element formed on/in a structured island shaped semiconductor substrate.

3. claim: 8

directed to a plurality of interconnected switching elements (integrated circuit) connected to an antenna.

4. claim: 10

directed to a label comprising a glue layer that is reversible/removably attached to the carrier.

5. claims: 12,13

a transfer method wherein the flexible coating is provided with protecting areas on the side surface of the coating.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB 03/04925

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